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Memo

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From the desk of
PHILIP T. GIDLEY

SITE RESPONSE & COMPLIANCE BRANCH

To Mr. DeLand

Herewith for your personal examination is our NC-246, which was sent to your predecessor Administrator, and to Holman and Sobolney. Our opinions and criticisms of RAMP are unchanged - we believe RAMP involves very considerable overkill and faulty conceptions.

Sincerely
P.T.G.

GIDLEY LABORATORIES, INC.
CHEMICAL AND ENVIRONMENTAL SCIENCES
FAIRHAVEN, MASS., U.S.A.

SDMS DocID 51842

PARTIAL COMMENTS ON THE NEW BEDFORD REMEDIAL ACTION PLAN—DRAFT REPORT JANUARY 24, 1983 (ROY WESTON, INC.)

PRELIMINARY GIDLAB REPORT NC-246

MARCH 3, 1983

TABLE OF CONTENTS

A. General Comments, Critique and Evaluation

B. Specific Comments on and Corrections of Specific Citations in the Weston RAMP

C. Appendix
Special Documents and References

D. Bibliography

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PARTIAL COMMENTS ON THE NEW BEDFORD REMEDIAL ACTION PLAN—DRAFT REPORT

PRELIMINARY GIDLAB REPORT NC-246

A. GENERAL COMMENTS, CRITIQUE AND EVALUATION

The RAMP draft is the latest report (concerning the same problem) in a series of studies and reports which have been pyramiding and proliferating since 1976, with considerable expenditures of time, money and effort. Illustrative of these past studies and plans are those of Woods Hole Oceanographic Institution (Summerhayes, Farrington, Tripp et alii), ACRED and AD HOC Committees (Goyette), Malcolm Pirnie, Inc. (Acushnet River Estuary PCB Study), GIDLAB (Phoenix, New Bedford Landfill, W.W.T.P, and SRPEDD #208), Geotechnical Engineers (New England Governors study), Massachusetts Water Pollution Control, Massachusetts D.E.Q.E., United States Coastguard, EPA, Southeastern Massachusetts University, and Metcalf and Eddy (PCB Problem: Data Management System).

It is GIDLAB's opinion that there have been too many studies and too few remedial actions. The RAMP advances no new concepts and presents no new data. The RAMP cites past existing or previously proposed category projects by federal, state, local, educational and research agencies and organizations. These projects and tasks are merely tabulated on a Gantt chart (without adequate critical evaluation of the several projects).

The primary merit of the Weston RAMP report is its recognition and recommendation of fast-tracking remedial action on critical contaminated sites (hot-spots). Prompt action on these "hot-spots" has been urged by GIDLAB for over five years.

The Weston RAMP does not criticize the past lack of appropriate enforcement procedures which have jeopardized the public health of area residents (see Article 11 of Section B of this GIDLAB Report NC-246). (Note: This lack of enforcement and inter-agency jurisdictional conflict and confusion has been vigorously and persistently pursued by Representative Roger Goyette.) Nor does the Weston RAMP address appropriate measures and jurisdictional control to ensure appropriate enforcement actions to protect the public at present or in the future.

We believe these RAMP recommendations contain many peripheral aspects which would better be placed outside of, or at least subordinated to, the major aspects of the problem. As examples of peripheral aspects, we cite blood-testing, Sullivan's Ledge testing and remedies, New Bedford Landfill testing and remedies, ecosystem modeling, air-testing in suburban communities, biological, chemical and geophysical elucidation of contaminant pathways and correlation of sediment concentrations with fish life.

The RAMP project would benefit, in our judgment, by immediate concentration on the contamination problem in the Acushnet River (the river estuary and

Partial Comments on the New Bedford Remedial Action Plan—Draft Report

A. GENERAL COMMENTS, CRITIQUE AND EVALUATION (Continued)

harbor) and immediate along-shore areas including such PCB contaminant contributors as the Aerovox and Cornell-Dubelier factory areas, the New Bedford sewage system and the New Bedford Waste Water Treatment Plant.

In general, to expedite effective remedial action and greatly reduce costs, we recommend all projects be judged by the COMAR (Cornell University) Risk Assessment System, which in summary prioritizes HIGH RISK aspects (areas) and LOW COST aspects (areas). GIDLAB believes the time, effort and expense of the RAMP study projects and proposals (similarly the Resolve study project, the Kingston, New Hampshire study project, the Davis Dump [Rhode Island] study project and many others) are too exorbitant. In view of the tremendous nationwide task of evaluating fourteen thousand hazardous (contaminated) sites and the limited state and federal funds available—GIDLAB strongly believes study costs (money, time and personnel) must be reduced. It is our opinion that a 90% to 100% effective remedial level can be attained at 10 to 20% of presently proposed or estimated costs of studying these nationwide hazardous sites.

P. T. Gidley

March 17, 1983

plp

Philip T. Gidley

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Chemical and Environmental Sciences
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PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP

1. Page 2, Article 1.2, First ¶

The third sentence is inaccurate or presents an inaccurate implication or assessment of known data. This sentence states "still less is known about the occurrence and effects of other chlorinated hydrocarbons, like polychlorinated dibenzofurans, polychlorinated—phenols and dioxins." The fact is there are literally thousands of reports on chlorinated hydrocarbons, PCDFs, PCPs, PCQs, dioxins and related chemical compounds. (See Appendix A of this report on Chlorhydros.)

2. Page 2, Article 1.2, Second ¶

RAMP states concerning "metal contaminants in the New Bedford Area" (Does RAMP mean in New Bedford Harbor?) that "little is known about their occurrence ...." This is incorrect; in fact, a very considerable amount of data exists on heavy metals in this area from nine survey projects of GIDLAB, at least two from Woods Hole Oceanographic Institute, three from Mass. D.E.Q.E., two from M.W.P.C., two from Southeastern Massachusetts University studies, two from Fairhaven High School Science projects, and others (See Appendix B of this report on "Heavy Metals").

3. Page 3, Article 1.2, Third ¶

RAMP isolates the PCB property cleanup activity proposals of Cornell-Dubilier and Aerovox from this RAMP, i.e., "are outside the scope of RAMP." GIDLAB strongly protests this exclusion as unscientific, impractical, and technically infeasible. The cleanup proposals must be technically reviewed by the lead authority of RAMP and must be coordinated physically and technologically with RAMP.

For example, if the sea-wall closure proposal of the Aerovox property is technologically inadequate, it may well result in further pollution of the adjoining RAMP protocol areas as the Acushnet River. Also, the plant property cleanup proposals to be valid and viable must be subject to the same chemical, engineering and environmental standards as the RAMP protocol areas.

4. Page 4, Article 1.2, Last Sentence

GIDLAB strongly endorses RAMP statement that the "PCB hot spots will be the focus of initial remedial measures over the next 6-12 months."

Note: GIDLAB has been urging this approach in several reports and forums for at least five years.

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

5. Page 5, Line 3

Add "and whenever" after "wherever" ("economically feasible").

6. Page 5, Last ¶

Again GIDLAB strongly endorses "fast track evaluation and remediation of PCB hot spots" which GIDLAB has continuously and repeatedly urged for over five years.

7. Page 7, Article 1.4.2

GIDLAB urges the maximization of use of existing data. Remediation should not be delayed for unnecessary new data ("data overkill" should be eliminated to avoid unjustifiable "action" delays and excessive costs).

8. Page 7, Article 1.4.3

Basic alternative technologies evaluation for each source site would be redundant and unnecessary. Common factor technology assessment need only be evaluated once for each technology.

9. Page 8, First Sentence

GIDLAB urges that "competitive bidding" should be subject to evaluation (by lead authority or its consultants) of the bidders' qualifications, experience, equipment and personnel.

10. Page 8, Article 1.4.8, Health Studies

GIDLAB believes that completion of epidemiological and health effect studies (which may require follow-up over considerable time spans) should not delay primary remedial actions (high risk or low cost).

11. Page 8, Article 1.4.9, Enforcement

Enforcement of procedures, remedies and public health protection measures (e.g., permitted lobster, shellfish and fishing activities) must be specifically defined and documented; specific responsibilities assigned to specific State and Federal agencies and the overall Enforcement supervision with full powers be assigned to an Ad Hoc Commission or "Czar"—before, during and after the RAMP.

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

11. Page 8, Article 1.4.9, Enforcement (cont.)

The past lack of enforcement measures (e.g., lobstering, shellfishing and fishing in restricted zones and also unrestricted access of children to hot-spot areas), the jurisdictional disputes and buck-passing between agencies constituted at least public health hazards which should not continue (See Appendix C, "Enforcement Problems and Conflicts of Agencies").

12. Page 12, Article 2.1, Second ¶

GIDLAB again strongly disagrees with the consideration of Aerovox and Cornell-Dubilier cleanups as "beyond the scope of RAMP." Unless these activities are evaluated by criteria equivalent to RAMP criteria and coordinated within the overall RAMP structure—then RAMP will fail.

13. Page 13, Article 2.2, First ¶

Metcalf and Eddy has missed inclusion of data from several studies by not researching all available studies and themselves indexing such data into their particular format which format factors may or may not be pertinent to the primary purposes of RAMP. Format factors (established after the fact of specific surveys) should not invalidate or skew valuable basic data.

14. Page 13, Article 2.2, Second ¶

RAMP states "while some data exist on heavy metals ... the focus of sampling ... has been on PCB contamination." This is inaccurate as considerably more data in the RAMP area exists not focused on PCB but on heavy metals, bacteria and other chemical and physical factors.

It should be emphasized that the Metcalf and Eddy study does not involve any new testing or analysis by M & E.

15. Page 14, Article 2.3.1, First ¶

The RAMP cites PCB concentrations "to greater than 10,000 parts per million." This statement would be more accurate and meaningful if stated "to greater than 100,000 ppm" (See Aerovox hot spot at 190,000 ppm—USCG survey).

16. Page A, Article 2.3.1, First and Second ¶s

The RAMP emphasizes PCB concentration as dependent on "the presence of fine-grained sediment." This is only partially correct, as PCB is also

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

16. Page A, Article 2.3.1, First and Second ¶s (cont.)

dependent upon the presence of sewage, peat, podzolic soils, fish gurry, organic matter and debris, wood chips and cellulosic waste, oil waste, organic dye wastes and similar materials.

The RAMP states that "most contamination resides in the uppermost 6 inches with substantial attenuation below this level." While some studies show this pattern, others show greater concentration of PCB and metals at depths of one foot to three feet or more. This concentration in respect to depth is site-specific and seems to be determined by the historic discharge patterns, the original concentrations; the erosion and sedimentation patterns, the flow rates and disturbance factors. GIDLAB believes if the RAMP evaluation is based on the "top-layer theory," erroneous and even dangerous conclusions will result.

17. Page 18, Last ¶

The RAMP states in respect to remedial measures, "What is needed is an elucidation of the contaminant pathways in the estuarine environment—biological, chemical and geophysical and a clarification of the relationship between the contaminant concentrations in the sediment and water and those in the important food species."

GIDLAB believes such an "elucidation" study is altogether too complex, too esoteric, inordinately expensive and much too time consuming and that the encompassing of so many variables would invalidate the accurate application of the modeling to actual harbor situation. Such an "elucidation," if comprehensively performed, would cost more than the total cleanup of the harbor.

18. Page 19, Article 2.3.2, Last ¶, New Bedford Municipal Landfill

The RAMP cites the 1978 EPA sponsored study "PCBs were also detected in fish, herring gull eggs .... from the surroundings." The citation of herring gull eggs from the surroundings is incorrect and inaccurate as these eggs were obtained from an island in Mattapoisett harbor! Mattapoisett harbor does not surround the New Bedford Municipal Landfill, and there was no established PCB relationship between the Mattapoisett island and the New Bedford Landfill. Much more likely but not proven would be a relationship to the scavenging gulls in the Acushnet River (Aerovox mud flats, Marsh Island Coggeshall flats, Cornell-Dubilier environs and the New Bedford sewage outfall).

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

19. Page 20, First ¶

The RAMP study stated "no PCB contamination of this (Dartmouth) drinking water supply, a finding which was also reached in 1980 by Gidley Laboratories, Inc."

While this is a narrowly correct statement, it may lead to an erroneous conclusion that GIDLAB perceived no potential hazard to the Dartmouth public water supply. In fact, GIDLAB (Consolidated Report ENC-647, 1980) was so concerned with this potential hazard and the obvious inadequacies of the State and Federal testing of the Dartmouth wells (it is too late to take protective measures in respect to the landfill when the wells become PCB contaminated!) that GIDLAB recommended a detailed Continuing Annual Monitoring Program for PCB Leachate from the New Bedford Municipal Landfill (GIDLAB Report ENC-647-AMP, April 8, 1980) with the strategy of taking immediate corrective steps of leachate control (outlined by GIDLAB in Appendix Report EN-647-3-S-2, August 3, 1979) at the landfill periphery.

Corroborating the above conclusions of GIDLAB, John Bewick, Secretary of the Massachusetts Executive Office of Environmental Affairs, issued a Certificate (9-27-79) to the City of New Bedford and its engineers (CDM) stated, "In view of the fact that a study of the landfill will be prepared for the Town of Dartmouth by Gidley Laboratories, Inc., which may yield further information to guide D.E.Q.E., the pending approval (Upgrading New Bedford Sanitary Landfill) should be such that it can be modified as appropriate after review of that study.

I also recommend that the proposed Groundwater Monitoring parameters be extended to include PCBs."

While the RAMP report states the EPA study showed "no contamination within detectable limits was found west, northwest and east of the site" and "less than 1 ppb" north of the site.

This RAMP did not cite (or ignored) the GIDLAB findings above detectable limits, for example Site #2, GIDLAB Dwg. A26101, Shawmut Brook (northerly), 3.0 ppb in water; Site #7 (ibid), 2.3 ppb in brook (which may originate partially or wholly from Sullivan's Ledge environs); Site #9 (ibid), 10.3 ppb in water; Site W-4, 382 ppb in soil core; Seep #6 (west wall), 8 ppb in leachate.

20. Page 20, Last ¶

GIDLAB doubts the technical feasibility or accuracy of geophysical confirmation by seismic methodology due to the transmissivity and conductance problems in the bog soils and water saturated strata at the landfill (cf. Report of seismologist to GIDLAB in Appendix D).

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

21. Page 21, Item #9

GIDLAB considers "isometric mapping of PCB contamination" to be too esoteric for this project, not needed, too costly and not practically valuable information.

22. Page 21, Second ¶

GIDLAB seriously doubts that a meaningful rate of contamination migration can be established for this project (See Appendix F, GIDLAB Report on Factors Determining Leachate Travel).

23. Page 23, First ¶

What is the proposed disposal technology and site for the 50 barrels of Cornell-Dubilier sediment cleanup (10,000 to 25,000 ppm PCBs)?

24. Page 23, Second ¶

What is the PCB content of the incinerator flue gas, ash and scrubber effluent?

Where is the (a) ash, (b) grit, and (c) effluent disposed of?

25. Page 25, Fourth ¶

The Weston RAMP draft report states the Geotechnical study was concerned with "dredging technologies" and does not cite Geotechnical Engineers as considering any other alternatives.

Actually the Geotechnical study considered the following alternative technologies:

a. Incineration of PCB Contaminated Sediment
b. Biodegradation
c. Transport and Burial in Out-of-State Landfills
d. Open Ocean Dumping, in fact, Turnbull (Geotechnical Engineers) stated that open ocean dumping "may be a feasible option."

Note: See Appendix G, "GIDLAB Review of Geotechnical Report."

The Weston RAMP report very briefly considers one segment of the Pirnie report. For a full evaluation, see Appendix H, "GIDLAB Comments on the Malcolm Pirnie, Inc. Report."

PARTIAL COMMENTS ON THE NEW BEDFORD

REMEDIAL ACTION PLAN—DRAFT REPORT

B. SPECIFIC COMMENTS ON AND CORRECTIONS OF SPECIFIC CITATIONS IN THE WESTON RAMP (cont.)

26. Page 26, First ¶

The Weston RAMP criticizes the Geotechnical and Pirnie reports as dismissing alternatives to conventional dredging and disposal sediments. GIDLAB disagrees with this Weston conclusion as both Pirnie and Geotechnical have considered other alternatives and certainly at least Geotechnical does not dismiss the options.

Weston does not clarify or even outline what is meant by "in-situ treatment" (Note: Weston does not state in-situ treatment and confinement, but in-situ treatment or confinement which implies confinement and in-situ treatment is not intended). Does in-situ treatment mean chemical injection of detoxicants into the unconfined hot-spot sediments? Or what?

What is meant or contemplated by "off-site treatment after removal" which factor is incidentally outlined by Pirnie and the Hudson River proposals.

27. Pages 27, 28, 29, 30, 31 and 32

As the Weston RAMP proposed sixteen project work statements are self-explanatory and in general duplicate or repeat previous project studies, a recommended project studies of Woods Hole Oceanographic Institute, Malcolm Pirnie, Inc.; Geotechnical Engineers, D.E.Q.E.; EPA, M.W.P.C.; Ad Hoc Committee (Goyettes), GIDLAB makes no comments except the general comment that many, if not all, of the proposed projects are unnecessarily complex and expensive and represent considerable research "overkill." If the extent and expense of this RAMP is repeated for several thousand hazardous waste sites in the United States, the Super Fund will be unable to undertake research and remediation of less than 10% of these hazardous sites.

28. Pages R-1 and R-2 (References)

The number of references is minimal and the selection of some references (without comment) is of dubious value.

March 2, 1983

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PARTIAL COMMENTS ON THE NEW BEDFORD REMEDIAL ACTION PLAN—DRAFT REPORT JANUARY 24, 1983 (ROY WESTON, INC.)

PRELIMINARY GIDLAB REPORT NC-246

MARCH 3, 1983

C. APPENDIX

SPECIAL DOCUMENTS AND REFERENCES

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List of Appendices

GIDLAB Report NC-246

A Chlorhydros (Chlorinated Hydrocarbons)

A-A Phoenix Proposal

A-B PCB at Ram's Island, Mattapoisett

B Heavy Metals

C Enforcement Problems and Conflicts of Agencies

D Seismic Testing Problems at New Bedford Municipal Landfill

D-1 Acushnet River Sediment Hotspots

D-2 New Bedford Harbor Shellfish Contamination (PCB in Mussels)

D-3 New Bedford Area—PCB in People

E PCB Transport—Sediment Water Column

F Leachate Travel of Metals and Other Contaminants

G GIDLAB Review of Geotechnical Engineers Report

H GIDLAB Comments on the Malcolm Pirnie, Inc. Report

J PCBX Process Technology

K Harbor Dredging Disposal—GIDLAB 1972

M-1 GIDLAB Comments on CZM Report of PCB Pollution in New Bedford

N Alongside Secure Containment—GIDLAB Proposal

P PCB's in New Bedford Harbor—GIDLAB Comments on Jahnke Article and PCB Testing Procedures

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